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ABSTRACT

Issues related to the assessment and induction (preparation, recruitment, and selection) of educational administrators are of critical importance because of the never-ending flow of entrants into administration, and because of the complex variables associated with assessment and selection criteria. Accordingly, this monograph traces the contributions made through University Council for Educational Administration (UCEA) publications to the identification and development of assessment skills. It then describes the historical background and methods associated with assessment centers, and it relates assessment center methods and processes to preparation programs for educational administrators. Finally, it examines the present applications and the future potential of these processes. References are included. (TE)

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ASSESSMENT CENTER METHODS IN EDUCATIONAL ADMINISTRATION: PAST, PRESENT, AND FUTURE

Frederick C. Wendel and
Ward Sybouts

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MONOGRAPH SERIES
UNIVERSITY COUNCIL FOR
EDUCATIONAL ADMINISTRATION

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ASSESSMENT CENTER METHODS IN EDUCATIONAL ADMINISTRATION: PAST, PRESENT, AND FUTURE

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FOREWORD

Assessment Center Methods is the third volume in the UCEA monograph series addressing questions of importance to the professions of educational administration. In this volume, Wendel and Sybouts describe past and current practices for recruiting and selecting school administrators and examine the potential assessment center methods have for improving current practice. They appear to cautiously endorse the methods, pointing to their strengths and weaknesses, especially for educational applications.

UCEA is grateful to Frederick C. Wendel and Ward Sybouts, both of the University of Nebraska at Lincoln, for this important monograph. We are also grateful to J. H. McGrath longtime professor of educational administration at Illinois State University, M. Scott Norton of Arizona State University, and Marilyn Tallerico, UCEA graduate assistant, all of whom reviewed the manuscript and made substantive and editorial suggestions.

The work of the University Council is accomplished only through the spirited generosity of professors and administrators who are anxious to make a contribution to their profession. We are happy that UCEA can provide the vehicle for these contributions. We look forward to a collection of monographs of the highest quality and interest.

Patrick B. Forsyth
UCEA Executive Director

Tempe, Arizona

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INTRODUCTION

Members of the University Council for Educational Administration (UCEA) have always had a keen interest in issues related to the assessment and induction (preparation, recruitment, and selection) of educational administrators. Assessment is of critical importance because of the never-ending flow of entrants into administration, and because of the complex and compounding variables associated with assessment and selection criteria.

The objectives of this monograph are (a) to trace the contributions made through UCEA publications to the identification and development of assessment skills; (b) to describe the historical background and methods associated with what are commonly referred to as "assessment centers;" (c) to relate assessment center methods/processes to preparation programs for educational administrators; and (d) to examine the potential and future of these processes.

❖ Chapter 1 ❖

ADMINISTRATOR ASSESSMENT AND INDUCTION: THE PAST

Since its formation in 1959, UCEA has played an active role in the analysis and design of preparation programs for administrators. Publications of the Council have included papers on the nature of the discipline, materials for classroom instruction, guidelines for preparation programs, identification of key issues, research reports, and similar topics related to training programs. In an early UCEA publication, Miller (1963) noted the need to distinguish between "common and specialized learnings"—skills, knowledges, and concepts which are common to administrators and those which are unique to administrators in specific roles or supervisory levels within a school or agency. Some of the concerns which Miller identified are recognizable more than twenty years later:

1. preparing increasing numbers of administrators for large, complex institutions,
2. increasing specialization in role differentiation,
3. identifying a common base of administrative thought, and
4. organizing preparation programs around a common set of elements rather than around position or role.

In the 1950s and 1960s, emphasis was placed on the use of the social sciences in the preparation of school administrators. Goldhammer (1963) argued that the social sciences had much to offer preparation programs because social scientists relied upon empirical findings, classified data or developed taxonomies, strove for objectivity, and used multiple observations of multiple events as a means of formulating theories, and examined human interactions of individuals and within groups. Administrator preparation incorporates many activities of social science, such as collecting data by distinct methods, examining events or data in a systematic way, selecting and using relevant data, utilizing appropriate research tools, and employing varied means for the prediction of consequences and actions. A quarter of a century later, readers of Goldhammer can also observe that the methods of social scientists are routinely incorporated into administrator preparation.

Recruitment and Selection of Administrators

The question of who is to administer schools is an important one. Considerable energy and resources are spent annually filling administrative vacancies. However, the efficacy of recruitment and selection practices is unknown. In the 1980s, the research on effective schools documented the importance of the principal's role. At the same time, nearly half of school principals will need to be replaced in the 1980s and 1990s (Baltzell and Dentler, 1983). The magnitude of the two issues—role importance and replacement—focuses attention on the need for improved recruitment and selection practices. As administrators have fewer years of service remaining, an increase in the rate of turnover is likely. In the remainder of this century, recruitment and selection of administrators can be expected to consume an increasingly greater share of educational resources.

Of great importance to UCEA member faculty is the admission of individuals who can benefit from graduate study, and who can, upon completion of their preparation, provide effective leadership. Wynn (1966) discussed how selection decisions were susceptible to scientific treatment, yet, because of the intricacies of human behavior, were subject to only general prediction. He points to the uncertainties involved in admitting students to administrator preparation when eventual job responsibilities, community locations, and job demands are all unknown. This situation is as puzzling in the 1980s as it was in the 1960s.

Common Practices. The typical processes for filling administrative vacancies in the public schools are reasonably standardized. After a position vacancy is determined, a notice is distributed within the district and to university placement offices. The extent of distribution has an effect on the number and quality of applicants. Compliance with equal employment opportunity regulations can vary and have an effect on the applicant pool. Qualified individuals from minority groups and women may not choose to apply if they sense little likelihood of passing initial screening. How well selection criteria are set and followed is a function of many personal and situational variables. Screening of applicants' materials and interview-

ing may be done by trained or untrained administrators, teachers, students, parents, or patrons who act individually, or in groups, and advise, recommend, or decide on a nominee. One constant in selection is the candidate interview; the person who does "best" as determined by the interviewer typically becomes the nominee. Usually the final step in the process consists of the superintendent forwarding a nomination to the board of education. Decision-making processes for filling administrative vacancies may be more probabilistic than scientific as advocated by Wynn (1966).

Of equal import is how educators become candidates for vacant positions, or, more fundamentally, how they are admitted to administrative preparation programs. Some individuals opt for an administrative career without being able to specify precise reasoning behind their choice. Others are influenced by peers, role models, mentors, family members, administrators, or professors. Some are motivated by the prospect of increased status, economic benefits, or power to influence or control others. Still others are moved by a set of fortuitous circumstances, by a high achievement motivation, or by other psychological, cultural, and social factors. Many districts have leadership training programs which attract and motivate employees to seek positions of increasing responsibility. That is one way individuals are recruited into administrator preparation. Describing how people are attracted to administration is easier than measuring the source, legitimacy, and power of their motivation. McIntyre (1966) highlighted the problem of selecting successful practitioners:

> Even the most optimistic survey of known selection tools reveals the inescapable fact that no one device or combination of devices can be relied upon to predict human behavior with a high degree of effectiveness. On the other hand, since we must still select people for administrative training and for administrative positions, we have no choice but to use the best tools we have as effectively as we know how (p.12).

Among the assessment tools and data available for selection noted by McIntyre were: (a) *categories*, such as mental ability, breadth of knowledge, human relations skills, emotional stability, moral and physical fitness, dependability, drive, age, experience, school activities, family history, and administrative style, and (b) *sources*, such as observer ratings, tests, transcripts, situational performance tests, discussions with officials, and biographical information forms. McIntyre urged that increasing importance be given to situational performance tests and to evidence largely behavioral in character and produced in settings heavily weighted to real working conditions. He suggested a start by "identifying those really crucial environmental forces that make the biggest difference either in how administrators generally behave or how their behavior is perceived by others" (p. 15).

The authors of a 1966 UCEA Position Paper addressed the need for the creation and implementation of plans to attract able and talented leaders. The Position Paper had three purposes:

> (l) to document the urgency of the recruitment challenge and to highlight its pervasive and long-range significance; (2) to define some of the major issues to be faced and tasks to be performed in meeting this challenge; and (3) to point to emerging action programs which have potential for attracting talented personnel into educational administration (p. l).

Sixteen position statements were developed about (a) the urgency of the challenge, (b) identifying prospective educational leaders, and (c) attracting talented personnel into educational leadership careers. Under the latter category, position sixteen reads: "Additional research evidence is needed to guide the efforts of those responsible for recruiting educational leaders." A lack of empirical research on the selection of administrators and the improvement of instructional practices in training programs has retarded progress toward the objectives contained in the UCEA position statement. While research is conducted and training programs are modified, the absence of programmatic research, Miklos (l972) averred, "is not only a source of embarrassment but also a major barrier to program improvement and innovation" (p. 47). Problems of recruiting and selecting school administrators cannot be resolved until more is known, based upon empirical findings, about what administrators are required to do.

Stout (l973) analyzed several factors affecting recruitment and selection. He noted that for years the talent pool from which administrators were selected was homogeneous, (i.e., white, male church-goers from rural America), and at variance with the heterogeneity of students and patrons in urban areas. He also noted that the role of university training programs could be diminished or even eliminated under certain conditions, e.g., the usurping of professional control of certification through legislative action. Additionally, Stout observed that the linkage between the recruitment and selection processes was so short and direct that demarcation between the two was often difficult to discern. Since teachers form the entry-level talent pool for administration, the selection process could be wrought with handicaps if teachers were subtly influenced to display compliance behaviors in their quest for administrative positions. Stout urged that selection criteria be as closely tied to successful completion of a training program as to success on-the-job. He proposed placing selection criteria on a continuum—one end point consisting of objective or value-free criteria and the other of subjective or value-loaded ones. His criteria were: physical factors, mental factors, traits/characteristics, attitudes, motivation/drive, emotional maturity, and dispositions. Although he did not expect a complete revamping of the selection process for administrators, Stout (l973) foresaw several trends: the allocation of more resources to selection, the use of varied selection criteria, the utilization of innovative methods for obtaining performance data about candidates, cooperative efforts among universities, and participation of others—students, teachers, parents, and community members—in selection decisions.

Preparation Programs

While administrative processes have common characteristics across organizations, administrator preparation programs generally emphasize factors unique to specific organizational roles. Miklos (1972), in a study of training-in-common, summarized several writers' viewpoints that administration was a generic study and consisted of skills and processes appropriate for all kinds of organizations. Because few institutions reported operating training-in-common programs, Miklos projected uncertain prospects for such programs. But the emphasis he placed on the similarities in skills, abilities, and knowledge necessary for all administrators continues to be of interest. The search for critical elements in administrator preparation continues.

Training Methods. Criticism of the content and instructional methods used in training has come from both within and outside of preparation programs. Changes have taken place in response to these criticisms, and new teaching methods and materials have been introduced. For example, problem-oriented seminars, simulations, laboratory training, game theory, independent study, case studies and increased emphasis on organization theory and development are now widespread. Wynn (1972) analyzed changes in instructional content and methods and described several factors related to those changes, including the availability of federal funds to UCEA for the development of improved instructional methods. The introduction of case studies and simulations has changed the role of students from passive learners to decision makers; from viewers of administrative problems as simple, isolated incidents to broader, more complex perspectives; from analysts of solely cognitive aspects to include affective dimensions; and from information absorbers to critical thinkers. Case studies and simulations also have high face validity, present concrete problems in a manageable way, focus upon problem solving skills and the use of administrative theory and processes, and encourage risk-taking. Responses of students also provide data on individual behavior in settings which closely approximate those faced on-the-job and gives instructors another means of assessing student performance. The disadvantages of such methods were also cited by Wynn: high production and operating costs, rapid obsolescence of materials, lack of guidelines for use in training or of training itself, a distortion of reality, and imposition of time, space, and other requirements that traditional methods do not have. However, Wynn was optimistic about the usefulness of more unconventional training methods.

> Instructional methods will continue to show a growing sophistication. For example, complex case materials will be developed with multiple roles and multiple components included. Models and theory will be applied increasingly to the design, use, and evaluation of the instructional methods and materials, thereby contributing not only to the refinement of the materials but also to our knowledge of administration. More emphasis will probably be placed on performance objectives, and instructional materials will be increasingly oriented in that direction. Similarly, one might

expect greater emphasis on administrative processes (p. 60).

The incorporation of unconventional methods and materials poses several types of problems: conceptual, logistical, and evaluative, as well as concerns for relevance and transferability. These problems surface more noticeably and are disturbingly present throughout the early stages of introduction and implementation, however, they should be viewed from a perspective of time—what is now standardized was once new and challenged (Wynn, 1972).

Field Experiences. Field experiences have also captivated the attention of those who plan preparation programs. Cronin and Horoschak (1973) averred that the advantages to students of such training include the opportunities: to put theory into practice in operational settings, to initiate action and receive feedback about such action plans, and to gain a perspective of how the educational enterprise actually functions. The most common approach is the school system survey. Practitioners generally believe that field experiences were fruitful components in their preparation but that field training was underemphasized. Critics of field training contend there is too little variety of field experiences, too little tailoring to individual need, and insufficient integration with other elements of preparation.

Skill Development. From their examination of futurist literature, Cunningham and Payzant (1983) concluded that traditional skills such as goal setting, planning, organizing, communicating and managing information, climate setting, and trust building would continue to be essential for education leaders. They also identified a set of eight emerging skills which they thought important for future leaders.

The essence of the skills which leaders must have to maintain their focus upon the present and the future was synthesized by Cunningham (1982) into several competencies and characteristics. He also proposed a goal and means to strengthen leadership preparation programs.

> Over the past five years I have had the opportunity to be involved in the appraisal of several doctoral programs in educational administration in different parts of the United States. Some of these were in UCEA institutions, and some were not. Although there is variation in quality, there is an overriding sameness about them. The similarities are in ethos, format, faculty composition, and mission. The work students engage in is overwhelmingly content centered. The residency as a requirement has vanished, for all intents and purposes. There is almost no planned leadership skill assessment or development. Skills that are developed are those embedded in academic performance, which is an excellent objective. There is no assurance, however, that persons who emerge from educational administration programs have leadership skills commensurate with the requirements of the future. This is obvi-

> ously an old problem, but given the change phenomenon of the 1980s, it seems that leadership skill development should have higher priority.
>
> Thus, I urge that UCEA establish a small task group to analyze the content and skill requirements of educational leadership for the remaining years of this century and produce recommendations for educational leadership program changes. To repeat, the focus should be upon the *requirements for leadership*, and as those are ascertained and clarified, then attention should be directed to the selection and organization of content and the identification and refinement of skill development proposals consistent with the qualifications essential for leadership effectiveness (pp. 26-27).

While changes have been incorporated into preparation programs, including the introduction of new methods and materials, analysts of training programs have consistently called for continued improvements and refinements. Delivery systems have altered the character of instruction and materials, as case studies and simulation exercises have focused upon "real" problems. The emphasis has changed from knowledge of content to application of skills in resolving problems, in either simulated or field settings.

Focus on the Future. Much effort on the part of UCEA members is directed toward the needs of the future and how those needs relate to changes in preparation programs, the skills administrators will need to develop, and the demands placed on educational leaders by economic, social, and political forces. Culbertson, Farquhar, Gaynor, and Shibles (1969) reported on the discrepancy which existed between training needs and available preparation programs. Although they concluded that preparation programs had changed in the 1960s, they saw a need to address continuing challenges and issues of importance. The recommendations of Culbertson et al. (1969) were broad in scope and substance. They identified means, e.g., extensive use of field experiences, and ends, such as the identification and recruitment of minority group members, for the improvement of preparation programs. The strains of themes heard in earlier reports were echoed in *Preparing Educational Leaders for the Seventies*. Recruitment and selection issues related to non-cognitive aspects of leadership and better measurement of situational and behavioral components of leadership were cited. Recommendations also called for program differentiation for role specialization, for individualized learning, and for greater responsibility for learning. References to changes in program integration reinforced a long-standing position that common bonds of knowledge and communication should provide insight into the purposes of education and shape core learning experiences for students in preparation for different roles. Additionally, the authors called for structures to allow more active and participatory learning by students. Use of cases, simulated materials, and management games were identified as useful in encouraging students to practice making decisions and in obtaining feedback about the choices

they made. The conclusions and recommendations made by Culbertson et al. (1969) were much the same as Wynn's (1972), with respect to the advantages of instructional methods and materials such as case studies and simulations. Cronin and Horoschak's (1973) major positions about the value of field experiences were also reasserted. The chief contribution of *Preparing Educational Leaders for the Seventies* was its comprehensive treatment of the need for changes in preparation programs.

Many of the recommendations made in *Preparing Educational Leaders for the Seventies* have not been implemented: for example, those related to recruitment and selection criteria. Culbertson et al. (1969) reported that, in a study completed by University of Minnesota personnel, none of the universities sampled was convinced that admission standards are related to eventual success of the candidate as a school administrator" (p. 192). The reliance upon interviews, letters of recommendations, rating scales, and similar instruments were thought to have little or no reliability as selection criteria. Thus, the use of performance-based measures of candidates' potential offers as much promise for improvement as continued reliance upon traditional screening practices. The need for selection procedures which possess greater predictive validity for successful administrative performance is well-documented. Culbertson et al. (1969) noted that literature on the subject

> . . . suggested that new kinds of screening techniques (such as sociometrics, situational performance tests, laboratory training exercises, and successive stage selection procedures) should be utilized, and that measures of noncognitive traits (such as creativity and value systems) should be obtained and assessed (p. 293).

In response to a range of criticism directed toward certification and preparation, a UCEA Certification Commission (Culbertson, 1973) was established to study the effect of certification on talent flow and preparatory programs in educational administration. Several recommendations of the Commission addressed leadership performance and reiterated ideas contained in the literature related to performance-oriented features of preparation programs. While the Commission proposed no alternative to certification, its members advocated changes in preparation programs which would alter emphases from cognitive elements to performance criteria.

In Part I of a series on *Preparing Leaders to Anticipate and Manage the Future*, Mackett and Steele (1982) examined the intricate and complex relationships between society and education. In their concluding section on "Educational Leadership," they identified eight broad leadership tasks which they envisioned for the 1980s and beyond.

1. **Real World Information Bases.**
   The task ahead is to develop more complete and accurate bases of information for policy, decision making, and action, including data sets which better reflect the complexity of the real world and which are applicable at national,

state, and local levels. Hopes for greater legitimate control of education cannot be left to the accidents of chance and serendipity or to the false hope that current information bases will suffice.

2. **Toward A Science of Education.**
The task ahead is to develop richer knowledge bases which incorporate what is known in the social and hard sciences but which are more directly applicable to educational circumstances, processes, and management. Education must advance both as an art and as a science.

3. **Ethics of Management.**
The task ahead is to develop ethically defensible positions on the role of education in promoting social progress. Conflicts over the great discrepancies in wealth, skills, and other benefits of education among the peoples of society must force educators to question, not only whether they dare not to play a role in social progress that would lessen these discrepancies.

4. **Power to Govern.**
The task ahead is to develop governance systems for education which more directly assure not only power to govern but power to govern toward educational goals which are defensible across all social strata. To be tenable, educational governance must proceed on the basis of some workable if imperfect compromises over who has a voice, who has power, who pays, and who benefits.

5. **The Resource Base.**
The task ahead is to renew and create new resource bases and to develop national, state, and local policies and funding systems that better support legitimate power to govern, defensible educational goals, and those conditions needed to meet goals. The great hopes of education for the people of society must be expressed in the levels of resources committed to education.

6. **Management Agendas.**
The task ahead is to establish management agendas that are responsive to social and educational problems and that prescribe concerted and defensible plans for action within established resource bases. What managers choose to do may be individualized but must still be and be seen by the people who support and benefit from education as being part of a socially responsible plan for education.

7. **The Educational Process.**
The task ahead is to create and govern a futures-oriented educational process which more effectively, equitably, predictably, and competitively meets society's educational needs. A strong public education may retain many old ways but must also vigorously seek and adopt new ideas and practices and

monitor their effectiveness.

8. **Management Skills and Commitments.**
The task ahead is to define and develop in educational managers the complex and high-level skills and commitments needed to govern education for the future. Management skills and commitments must advance to become more sophisticated and broadly-based if opportunities for educational improvement are to be perceived, acted on, and successful (Mackett and Steele, 1982, pp. 76-81).

Although they did not offer specific prescriptions for management action or behavior, Mackett and Steele (1982) expressed a familiar theme: "The task ahead is to define and develop in educational managers the complex and high-level skills and commitments needed to govern education for the future" (p. 81).

Hoyle and McMurrin (1982) addressed the topic, *Critical Challenges for Leaders Who Anticipate and Manage the Future*, in Part II of the series. They identified six major areas which they projected would most probably present stern challenges to educational leaders in the remainder of the twentieth century. The areas selected for description and analysis were: (a) changing demographics, (b) economics, (c) technology, (d) occupational and vocational education, (e) human rights, and (f) family structure.

The work of describing the types of leadership skills needed by administrators to face the six challenges was left to Cunningham and Payzant (1983) in Part III of the series, *Understanding, Attitudes, Skills, and Symbols: Leadership in the Future.* They identified two sets of leadership competencies: (a) one set of emerging skills needed for the future and (b) a second set of enduring leadership skills. The two sets are a mixture of commonly recognized, "enduring" skills (goal setting, purpose defining, planning, and organizing) and others which are emerging from discussions of leadership found in the literature. Cunningham and Payzant identified as "emerging" skills: (a) focusing upon the present and the future simultaneously; (b) bridging between and among many sectors of interest; (c) mixed scanning, monitoring, and interpreting; (d) adapting to sustained changes; (e) appraising environments; (f) utilizing intuition; and (g) managing symbols.

Tyler (1982) noted three major achievements of programs offered by UCEA since its founding in 1957. First was the bringing together of theory and practice by emphasizing for practitioners how theory provided concepts and principles for guidance in seeking solutions to general problems rather than providing answers to specific ones. The second contribution was incorporating perspectives of various disciplines into the accepted bodies of theory and practice of educational administration. The third achievement consisted of contributions to the improvement of training programs for administrators.

Preparation programs can continue to benefit from applying theory to practice, from incorporating perspectives from other disciplines, and from continuing to seek sources of improving training programs. The assessment center method may be one source for the study of the characteristics of administrators and their development and, consequently, for the continued improvement of administrator preparation. An ensuing section contains a description of the method and how applications of its features are useful in identifying administrator skill levels.

Summary

Professors from UCEA member institutions have devoted considerable attention to the identification of skills needed by educational administrators. Studies of practices, projections for the future, position papers, and other forms of analyses have described past, present, and future contexts in which educational administrators are prepared for their profession. An emphasis on administrator skills has been a continuous thread throughout the literature. Writers have described those skills in diverse ways, ranging from "a need to relate to forces shaped by changing demographic patterns" to those of long-standing recognition and importance, such as "planning." Despite the progress made in the 1960s and 1970s toward clarifying what administrators must be able to do, the forces of the present and future are combining to change what is known and practiced. These changes in turn require continued efforts to identify better procedures for the assessment and induction (preparation, recruitment, and selection) of educational administrators.

❖ Chapter 2 ❖

ASSESSMENT CENTER METHODS

The purpose of this section is to describe the historical background and methods commonly associated with assessment centers. Although used to a great extent in business, industry, government, and the military, assessment centers are relatively new to educational administration. A majority of the Fortune 500 companies operate assessment centers (Schmitt et al., 1982), generally for the identification of entry-level managers. But the introduction of assessment centers into schools, colleges, universities, and other education agencies has lagged behind that of other public and private enterprises.

Background

The origins of the assessment center concept are credited to German military psychologists. In the 1930s, assessment center methods were used to select German army, navy, and air force officers. The procedures utilized were based on two principles: (a) holistic observation, (the analysis of component parts as they relate to the whole), and (b) naturalistic observation, (the observation of behavior in natural situations). The German military assessment programs used both multiple assessors and assessment techniques to judge the performance of complex behaviors. The major difficulties of the program in its efforts to assess the overall character of officers were the lack of standardized administration and observation procedures, the use of unpolished simulation exercises, a reliance upon handwriting and facial expressions to assess leadership, and a lack of validation of the program.

A British foreign service officer stationed in Berlin learned about the German military assessment program and reported on its success. After further investigation, the British established War Office Selection Boards (WOSB) to identify army officers during World War II. The British program was modeled after the Germans' and made extensive use of intelligence tests, psychiatric interviews, and situational tests. A major achievement in the WOSB program was a heavy reliance on leadership assessment in group situations, particularly through the use of problem-solving tasks without the designation of a leader. The British also introduced reliability and validity studies for the evaluation of their assessment centers.

The first fully developed assessment center in the United States was operated by the Office of Strategic Services (OSS), the forerunner of the Central Intelligence Agency (OSS Assessment Staff, 1948). Between 1943 and 1945, the OSS had to select personnel for many positions, ranging from secret agents and saboteurs to propaganda experts and secretaries. The selection of personnel was compounded in difficulty by the importance of the work, the variety of settings to which personnel would be assigned, and by the lack of job descriptions. Despite the complexity and ambiguity of the personnel management task, the assessment program was developed, from conception to implementation, in slightly more than two months' time. The list of 57 staff members of the OSS program includes many well-known names: Henry Murray, Urie Bronfenbrenner, John W. Gardner, Jacob W. Getzels, David Krech, Donald W. MacKinnon, Theodore M. Newcomb, and R. Nevitt Sanford; two of the consultants were Clyde Kluckhohn and Kurt Lewin.

Although early OSS assessment procedures were crude, information from field operators and visits by OSS staff to foreign fields aided in improvement of the program. Both subjective and objective exercises were used, including the Otis Self-Administering Test of Mental Abilities, biographical data, and a vocabulary test. Some of the better known components were situational exercises designed to let participants demonstrate energy, intelligence, leadership, and the ability to work with others. These exercises included "Brook," which presented the problem of moving a log and a rock across a stream. A construction activity, "Behind the Barn," required the participant to build a wooden structure with large tinker toys, while being assisted by two uncooperative farm workers played by assessors. This exercise tested leadership and the ability to withstand stress. Leaderless group discussions, a map test, a belongings test which measured ability to observe and draw inferences, an interrogation test, and others were used to measure the primary dimensions of the program: motivation, practical intelligence, emotional stability, interpersonal relations, leadership, observation and reporting abilities, and propaganda skills. From their experiences, the OSS staff developed recommendations which are still useful in evaluating how assessment center methods and processes have developed.

Business and Industry. While the OSS assessment center has "pride of place" as the first use of assessment center methodology in the United States, the American Telephone and Telegraph Company's Management Progress Study (MPS) was

unique in conceptualization and execution. Initially, the MPS was a long- term study of the psychological development of adults as they attempted to become middle and upper level managers. Information collected from assessment of subjects in the MPS was not used within the corporation for career decisions (Bray and Grant, 1966). Between 1956 and 1960, 422 men were assessed in groups of 12. Over three and one-half days, 25 characteristics of managerial functions, interpersonal relations, general abilities, values and attitudes were assessed in a two-hour interview, an in-basket exercise, a business game, a leaderless group discussion, projective tests, paper-and-pencil tests and inventories, a personal history questionnaire, and an autobiographical essay. The use of non-psychologists as assessors was a major change from previous practices. Whereas earlier centers, particularly the German, had relied upon the use of psychologists as assessors, the use of non-psychologists permitted the expansion of assessment centers. Research studies conducted by Bray and his associates found the overall assessment ratings to be predictive of the actual career progress participants made within AT&T in later years. When the Bell system found a 10 to 30 percent improvement in selection success by using assessment center ratings instead of traditional selection procedures, the company increased its utilization of assessment center methods (Bray, Campbell, & Grant, 1974).

Since the Management Progress Study, the format developed by AT&T is the model for most assessment centers. AT&T was the first, and is the largest, user of assessment centers for selection of salespersons. High, positive correlations exist between overall ratings and two criterion variables: training and field performance. Turnover among employees who were rated as acceptable was about half as high as turnover among employees who were rated as less than acceptable. AT&T also uses management assessment programs which stress developmental activities in addition to those which help in the identification and selection of managers.

Other industrial and business corporations using assessment centers (Moses and Byham, 1977) include Standard Oil (Ohio), Sears, IBM, General Electric, Caterpillar Tractor, Huyck Corporation, Pitney Bowes, Eastern Airlines, Wickes Corporation, Ford Motor, General Motors, Minnesota Mining and Manufacturing Corporation (3M), and Atlantic Richfield. General Electric (GE) has used an assessment center for middle management selection and career planning. GE's Talent Development Program was designed to provide an immediate supervisor with information to help develop a participant's potential for managerial promotion. Ford Motor Corporation also has a developmental aspect to its Foreman Assessment Center which identifies potential foremen. Ford's middle management program (Management Career Planning Center) is used for both career planning and developmental purposes and is not expressly designated as a factor in immediate promotion.

In 1962, Standard Oil (Ohio), was the second corporation to use assessment centers. It broadened the features of the AT&T model to measure success for a multiplicity of management roles. U.S. Steel, Standard Oil (Ohio and Indiana), and Union Carbide are among the firms which use special exercises to emphasize health

and safety considerations to select mine supervisors. Tenneco Oil Company selected its chief pilots by use of assessment center procedures. Matrix managers at American Express are assessed through exercises which emphasize planning, organization, and analysis—job-related skills of extreme importance. Because a matrix manager has responsibility for a project but not for personnel, the assessment exercises focus upon administrative skill dimensions. Merrill Lynch uses telephone conversations, personal conversations, and in-basket exercises for the selection of stockbrokers. By using assessment center processes for selection of stockbrokers, their turnover rate was reduced by 42 percent.

Governments. Government agencies also make extensive use of assessment center methods. The Federal Aviation Administration uses assessment centers to select applicants for instructor positions. The U.S. Department of State, since 1978, has used five activities in its process for selecting entry-level foreign service officers. Federal administrative judges who adjudicate disputes between government agencies and contractors are selected by using a combination of targeted behavior interviewing and assessment center methods.

The Canadian government has used assessment centers to predict the advancement of scientists within the Civil Service Commission and to identify potential candidates for senior-level management positions (Moses and Byham, 1977). Candidates who are recommended for development receive a three-month training program away from their jobs and subsequent job rotation and counseling. The Department of Customs and Excise, after identifying candidates with first-level management potential, places them into an "Internal Management Program" and into rotating job assignments. The Career Assessment Program of the Canadian government has as its mission the identification of personnel with broad experiences, proven performance, and executive potential for the Public Service of Canada. Successful applicants receive management training and engage in rotating job assignments in both government agencies and private industry.

The Philippine government used background interviews and two simulation exercises to gather information on the skills of their commercial attaches. The purpose of this program was to identify developmental needs to permit upgrading, development, and reorganization of the work of the nation's commercial attaches.

The Military. Military units continue to use assessment centers. The British Army's Regular Commission Board evaluates about 1500 candidates each year. Although minor modifications have been made, procedures are similar to those of World War II. There are two interesting features to the process used by the Regular Commission Board. First, three assessors observe each exercise. One has read the candidate's file; another has not read the file but has conducted an in-depth interview; and the third assessor has no prior knowledge of the candidate. Second, a "pre-Board" conference is held when a candidate's performance is likely to be difficult to assess or to provoke considerable debate.

U.S. military forces have widely employed assessment centers, especially since the early 1970s. The U.S. Army has programs for leadership development training for officers, company commanders, adjutant general officers, recruiters, and a lieutenant selection program. The Army Leadership Assessment program was designed expressly for officer candidates in the Reserve Officer Training Corps (Rogers, Wood, and Williams, 1982).

Law Enforcement. The use of assessment centers in the selection of police officers highlights one advantage of such a selection program. While courts have ruled that traditional paper-and-pencil tests do *not* meet Equal Employment Opportunity guidelines, the use of assessment exercises related to behaviors required on the job increases the likelihood of unbiased selection of applicants. The Ft. Collins, Colorado Police Department has used three situational exercises in its assessment program; for example, applicants are given background information on a typical situation, such as illegal parking, and confronted by a confederate who plays the role of a citizen. Recruits at the Police Academy in Chicago complete several exercises, each rated by a civilian and a police officer; the two police officers later convene to review the data and to make a prediction about the recruit's probable success and performance as a police officer.

Research Studies. Despite the extensive use of assessment centers in the public and private sectors, critics have raised questions about the validity, reliability, appropriateness of method, and other concerns (Ross, 1979). In the first legal challenge to assessment center methods, several applicants for Deputy Chief of Police in Omaha, Nebraska, contested the selection of the top three candidates, primarily on the basis of the reliability of assessors' ratings ($r = .84$). The judge upheld the selection because the process met or surpassed minimal ethical standards for conduct of assessment centers. The *Griggs vs. Duke Power Company* case broadened the significance and application of reasonable cause in selection of employees and endorsed the position of the Equal Employment Opportunity Commission (EEOC) that test scores must be related to success on the job (Willis and Becker, 1976). Although setting up an assessment center which meets ethical standards and complies with requirements of the EEOC and other civil rights agencies is not easy, the benefits available from valid and reliable documentation are, for many, worth the efforts.

In 1964, Albrecht, Glaser, and Marks reported research validity studies which they found to be "cautiously supportive" (p. 352). Correlations from one multiple-assessment validity study ranged from -.05 to .46. They also reported slight, but not strong, validity for the interview; questionable results for the projective instruments; weak relationships between objective psychometric devices and the criterion; but best results for predictor ratings based on the psychometric data. Many other studies have been conducted since then, but none has matched the longevity of AT&T's Management Progress Study. Indeed, one of the major criticisms is that, too often, studies are not longitudinal. Other critics contend that results from an assessment center must be but one part of selection data, while others doubt the long-term stability of perform-

ance data from an assessment center.

Nevertheless, a large body of research exists which contains data on assessment center methods. For example, Kraut (1972) reported the results on 437 salesmen. Those who were rated higher in the assessment center received initial promotion earlier. They also were more likely to be given a second promotion ($p<.01$), while some of those with lower ratings were demoted ($p<.07$). Kraut noted from his research that " . . . assessment programs have validity in predicting those who will move ahead in an organization. Many of the studies have flaws, but there is a consistent pattern of apparent validity" (p. 318).

Dozens of studies have been conducted on assessment center validity and reliability under varying circumstances from small firms to multi-national corporations, from studies with and without control groups, from those with experimental designs, from concurrent designs, and from correlational studies with and without feedback to participants. Studies have been conducted on centers operated by American Airlines, AT&T, Caterpillar Tractor Company, Detroit Edison, General Electric, IBM, Internal Revenue Service, Michigan Bell, the New York Metro Transit Authority, the Public Service Commission of Canada, Sears, Standard Oil of Ohio, Tennessee Valley Authority, Union Carbide Corporation, and the Wickes Corporation, among others. In appraising the assessment center method, Hinrichs and Haanpera (1976) reported that in, terms of the reliability of an overall measure, the method was adequate, if not outstanding. Further, they found at least minimal reliability for the overall assessment rating, the judgments about overall performance within specific exercises, and overall evaluations for individuals. Hinrichs and Haanpera (1976) wrote:

> Other studies show that these overall evaluations have validity by correlating significantly with important criteria on a concurrent basis, and, more important, also on a predictive basis . . . . There are also indications that these kinds of overall evaluations are fair, i.e., they do not discriminate unfairly against minority and female participants (p. 33).

Thornton and Byham (1982) summarized their review of studies on the criterion validity of the overall assessment center judgment by noting that there were mixed results, but that assessment center data were more accurate predictors than paper-and-pencil tests or ability and personality test scores. Likewise, they found that information from assessors on exercises and dimension rating was more valid than single test scores and that validity of the overall assessment rating was more stable over time. Thornton and Byham concluded with an admonition to use a selection system that uses multiple sources of information.

The scope and depth of research on assessment centers is voluminous—far beyond the scope of this paper. Serious reviewers will examine for themselves the

literature on validity and reliability studies. Although they will find extensive documentation in support of assessment centers, they will also find flaws and gaps in the research. One unanswered question, for example, is: Are the results from an assessment center worth the cost? But, regardless of the imperfections in assessment centers, their methods cannot be dismissed out of hand. The evidence is too great in quantity, too consistent in quality, too tempting in interest, and too promising in outcome.

Promising Practices in Education. Baltzell and Dentler (1983), in their study of the selection of principals, reported on two phases of their research. In phase one they described common practices in the selection of school principals and derived three major implications from those practices (p. 33). The first was a need to sharpen selection criteria, especially with regard leadership skills. A second need was for improved ways of gathering data about behaviors or performance of candidates for principalships. The third implication was that selection criteria must be flexible and adaptable to local districts' needs and values.

In phase two, Baltzell and Dentler (pp. 34-42) described three alternative approaches to principal selection: (a) internships, (b) exemplary districts which relied on conventional methods and did not use internships or assessment centers, and (c) assessment centers. The internship programs studied were those of Hayward Unified School District, California, and Montgomery County Public School System, Maryland. The selection processes of two Florida counties, Broward and Hillsborough, served as models of exemplary conventional practices. The National Association of Secondary School Principals (NASSP) Assessment Center in Howard County, Maryland, provided the basis for the description of assessment center methodology.

The NASSP Assessment Center held several advantages for Howard County.

> District administrators estimate that the Center's ability to discriminate will reduce the candidate pool (probably by half or better) and provide much more information about each candidate that is recommended to the superintendent. In addition, the district expects that the Center will increase the certainty of due process by standardizing assessment of specific job-related skills. Finally, the Center will provide definitive feedback to the candidates themselves, and district leaders hope ultimately to use it for staff development purposes. (Baltzell and Dentler, 1983, pp. 35- 36).

Assessment Centers: Definitions and Descriptions

Since the 1950s, assessment center methods have been widely used in many countries. In the United States, some 30,000 persons each year are assessed by business, industry, and government. Tielsch and Whisenand (1977) contended that little change had occurred in the past century in the selection and promotion of law

officers and described assessment center technology as offering "great hope for the future of public, as well as private, personnel administration" (p. 2). Other authors have also described assessment center processes as being among the major developments in personnel psychology during the 20th century (Thornton & Byham, 1982). What distinguishes assessment center processes from other processes used for personnel selection? In what ways does the use of assessment centers offer a "great hope" for personnel practices?

Definition. In May, 1975, the Third International Congress on the Assessment Center Method endorsed the "Standards for Ethical Considerations for Assessment Center Operations." The minimal requirements to be met are:

> Multiple assessment techniques must be used. At least one of these techniques must be a simulation. A simulation is an exercise or technique designed to elicit behaviors related to dimensions of performance on the job by requiring the participant to respond behaviorally to situational stimuli. The stimuli present in a simulation parallel or resemble stimuli in the work situation. Examples of simulations include group exercises, in-basket exercises, and fact-finding exercises. Multiple assessors must be used. These assessors must receive training before participating in a center. Judgments resulting in an outcome (i.e., recommendation for promotion, specific training or development) must be based on pooling information from assessors and techniques. An overall evaluation of behavior must be made by the assessors at a separate time from observation of behavior. Simulation exercises are used. These exercises are developed to tap a variety of behaviors and have been tested prior to use to ensure that the techniques provide reliable, objective, and relevant behavioral information for the organization in question. The dimensions, attributes, characteristics, or qualities evaluated by the assessment center are determined by an analysis of relevant job behaviors. In summary, an assessment center consists of a standardized evaluation of behavior based on multiple inputs. Multiple trained observers and techniques are used. Judgments about behavior are made, in part, from specially developed assessment simulations. These judgments are pooled by the assessors at an evaluation meeting when all relevant assessment data are reported and discussed, and the assessors agree on the evaluation of the dimensions and any overall evaluation that is made. The following kinds of activities do not constitute an assessment center:
>
> —panel interviews or a series of sequential interviews as the sole technique.

—reliance on a specific technique (regardless of whether a simulation or not) as the sole basis for evaluation.

—using only a test battery composed of a number of pencil-and-paper measures, regardless of whether the judgments are made by a statistical or judgmental pooling of scores.

—single assessor measurement (often referred to as individual assessment)—measurement by one individual using a variety of techniques, such as pencil-and-paper tests, interviews, personality measures, or simulations.

—the use of several simulations with more than one assessor where there is no pooling of data—i.e., each assessor prepares a report on performance in an exercise, and the individual reports (unintegrated) are used as the final product of the center.

—a physical location labeled as an "assessment center" which does not conform to the requirements noted above (Moses & Byham, 1977, pp. 304-305).

Assessment centers are popular for several reasons. One is the difficulty in defining a manager's responsibilities. Not only do managers' jobs differ at different levels (for example, entry level versus senior executive), but also within levels, and, of course, between agencies or firms. One first-level manager may have a heavy responsibility for close supervision of personnel; another may be required to handle a heavy volume of paper work; a third may have equal responsibility for people and paper. Other factors serve to complicate job analyses: (a) changes, whether within or external to an organization, may have an effect upon the nature of a manager's job; (b) one-time tasks may be critical to a manager's success but may be difficult to define because of the singular nature of the task; or (c) the effect of the work of others may alter a manager's job, such as, a change in the manager's supervisor. A second reason for the popularity of assessment centers is that they provide the opportunity for use of assessments of desired behaviors rather than typical measures from on-the-job evaluations. Most supervisors have little objective data for use in predicting individual performance at higher position levels. The use of paper-and-pencil tests has been criticized as an assessment method. Although such tests may be reliable and valid, they often fail to meet the tests for fairness and non-discrimination established by the Equal Employment Opportunity Commission and other civil rights agencies.

Description of a Center. A description of a typical assessment center may clarify what an assessment center is and how it operates. An assessment center involves a standardized set of procedures and multiple activities, (including one or more simulation exercises), to assess behavior for purposes of selection, placement, development, or promotion. An assessment center is not a location; an organization

may conduct assessment activities in many locations and not always in the same building or set of rooms.

When an assessment center is conducted, a limited number of participants (or assessees) is assessed. Generally, the number of participants varies from 1 to 12; the ratio of participants to assessors is usually 2:1 or lower. Although the high staff ratio adds to the cost of assessment centers, it is necessary to meet ethical considerations. Participants may attend one of more days of activities. This time is spent in the completion of both individual and group tasks, such as fact-finding exercises, in-basket exercises, leaderless group exercises, interviews, business games, inventories, and paper-and pencil tests of knowledge. Many of the activities are simulations designed to measure specific behaviors.

An assessor prepares a written report on a participant's performance for each activity included in an assessment center. If an assessment center includes five activities, there will be five written reports for each participant. These reports, often prepared on standardized forms, contain observations related to specific behaviors and produce diagnostic information about each participant's performance on several behavior dimensions. After the participant activities are completed, the assessors, working as a team in a consensus discussion (jurying) of the written reports, identify strengths, areas in need of improvement, and suggestions for improvement for each participant. Based on the jurying, one assessor prepares a written report which is given to the participant in an oral feedback session conducted by the director of the center. While participants may spend two days in completing the activities, the assessors will spend those two days observing and gathering data, and preparing written reports on the exercises, and, two or three days in jurying. At the conclusion of the consensus discussion, each assessor has one or more final reports to write. The director of a center reviews the written reports, edits them, or has them reviewed by the assessor team, and meets individually with each participant to provide oral feedback and present the final report.

Major Elements

There are three elements essential to the conduct of an assessment center. First, the skill dimensions for the type of position to be observed and assessed must be identified. Second, the activities to be used as assessment exercises must be designed, tested, and developed. Third, the persons who will serve as assessors must be trained. Each of these major elements must be planned with care.

Skill Dimensions. The prevailing opinion of experts on assessment centers is that no single set of managerial skills apply equally to all managerial positions. Four conclusions, based on the research related to the question of what skills should be assessed, include:

1. Managers' jobs differ greatly from one another, both in

substance and mode of operation.

2. There is little agreement between the job duties reported by incumbent supervisors and their duties as seen by their superiors.

3. Upper level management positions can be distinguished from middle and lower levels in terms of the amount of decision making and severity of personal demands of the job.

4. The relation between job duties and individual behavior is an important consideration, especially in analyzing higher level management jobs. Different management styles can and do lead to identical results (Moses & Byham, 1977, pp. 56-57).

Skill dimensions must be job-targeted. The "chairperson of the board" syndrome, that is, that individuals selected must be able to do *not* only the job for which they are selected but all upper level jobs as well, is inappropriate unless internal promotion is the only method used to fill upper level jobs and a significant number of persons selected at lower levels do progress to upper levels. Based upon their review of job analysis efforts in managerial assessment centers, Thornton and Byham (1982) concluded:

1. Managerial jobs can be defined in terms of a set of behavioral dimensions. These behavioral dimensions can be operationally defined as clusters of behaviors observable on the job and in performance tests that simulate important aspects of the job.

2. Managerial jobs can be distinguished from each other in terms of unique sets of dimensions. Jobs at different levels of management and often at the same level are characterized by different sets of dimensions. The same dimension label (for example, Analysis) may be manifested in qualitatively different ways for jobs at different hierarchical levels.

3. Managerial jobs must be defined in terms of a relatively large set of dimensions. An exact number cannot be specified, but we do not believe it is adequate to use only two major categories. that have been variously labeled task centered (initiating structure, production-oriented) and employee centered (consideration of people, employee-oriented). Ten to fifteen dimensions are required to adequately define managerial jobs for the purposes of assessment programs. For developmental purposes, a longer list of dimensions provides

a more thorough diagnosis of reasons for effective and ineffective performance.

Despite the repeated caution about the need for behavior dimensions to be job-related, common behavior dimensions have been identified by several authors. Bender (1973) listed 26 commonly used dimensions and Thornton and Byham (1982) listed 33. For illustrative purposes, Thornton and Byham's list is presented:

Oral Communication: Effective expression in individual or group situations (includes gestures and nonverbal communications).

Oral Presentation: Effective expression when presenting ideas or tasks to an individual or to a group when given time for preparation (includes gestures and nonverbal communication).

Written Communication: Clear expression of ideas in writing and use of good grammatical form.

Planning and Organizing: Establishing a course of action for self and/or others to achieve a specific goal; planning proper assignments of personnel and appropriate allocations of resources.

Delegation: Utilizing subordinates effectively; allocating decision making and other responsibilities to the appropriate subordinates.

Control: Establishing procedures to monitor and/or regulate processes, tasks, or activities or subordinates and job activities and responsibilities; taking action to monitor the results of delegated assignments or projects.

Development of Subordinates: Developing the skills and competencies of subordinates through training and development activities related to current and future jobs.

Organizational Sensitivity: Action that indicates an awareness of the impact and implications of decisions on other components of the organization.

Extraorganizational Sensitivity: Action that indicates an awareness of the impact and implications of decisions relevant to societal and governmental factors.

Extraorganizational Awareness: Use of knowledge or changing societal and governmental pressures outside the organization to identify potential problems and opportunities.

Organizational Awareness: Use of knowledge and changing situations and pressures inside the organization to identify potential organizational problems and opportunities.

Sensitivity: Actions that indicate a consideration for the feelings and needs of others.

Leadership: Utilization of appropriate interpersonal styles and methods in guiding individuals (subordinates, peers, superiors) or groups toward task accomplishment.

Recognition of Employee Safety Needs: Awareness of conditions that affect employees' safety needs and taking action to resolve inadequacies and discrepancies.

Analysis: Identifying problems, securing relevant information, relating data from different sources, and identifying possible causes of problems.

Judgment: Developing alternative courses of action and making decisions based on logical assumptions that reflect factual information.

Creativity: Generating and/or recognizing imaginative solutions and innovations in work-related situations.

Risk Taking: Taking or initiating action that involves a deliberate gamble in order to achieve a recognized benefit or advantage.

Decisiveness: Readiness to make decisions, render judgments, take action or commit oneself.

Technical and Professional Knowledge: Level of understanding of relevant technical and professional information.

Energy: Maintaining a high activity level.

Range of Interests: Breadth and diversity of general business-related knowledge; well-informed.

Initiative: Active attempts to influence events to achieve goals; self-starting rather than passive acceptance. Taking action to achieve goals beyond those called for; originating action.

Tolerance for Stress: Stability of performance under pressure and/

or opposition.

Adaptability: Maintaining effectiveness in varying environments, with various tasks, responsibilities, or people.

Independence: Taking action in which the dominant influence is one's own convictions rather than the influence of others' opinions.

Tenacity: Staying with a position or plan of action until the desired objective is achieved or is no longer reasonably attainable.

Job Motivation: The extent to which activities and responsibilities available in the job overlap with activities and responsibilities that result in personal satisfaction.

Career Ambition: The expressed desire to advance to higher job levels with active efforts toward self-development for advancement.

Integrity: Maintaining social, ethical, and organizational norms in job-related activities.

Work Standards: Setting high goals or standards of performance for self, subordinates, others, and organization. Dissatisfaction with average performance.

Resilience: Handling disappointment and/or rejection while maintaining effectiveness.

Practical Learning: Assimilating and applying new, job-related information taking into consideration rate and complexity (pp. 138-140).

NASSP Behavior Dimensions. In the National Association of Secondary School Principals Assessment Center there are 12 behavior dimensions. They are similar to those in the listing by Thornton and Byham, except that Educational Values are also included.

Problem Analysis. Ability to seek out relevant data and analyze complex information, to determine the important elements of a problem situation; searching for information with a purpose.

Judgment. Skill in identifying educational needs and setting priorities; ability to reach logical conclusions and make high quality decisions based on available information; ability to criti-

cally evaluate written communications.

Organizational Ability. Ability to plan, schedule, and control the work of others; skill in using resources in an optimal fashion, ability to deal with a volume of paper work and heavy demands on one's time.

Decisiveness. Ability to recognize when a decision is required (disregarding the quality of the decision) and to act quickly.

Leadership. Ability to get others involved in solving problems; ability to recognize when a group requires direction, to effectively interact with a group to guide them to accomplish a task.

Sensitivity. Ability to perceive the needs, concerns, and personal problems of others; skill in resolving conflicts, tact in dealing with persons from different backgrounds; ability to deal effectively with people concerning emotional issues; knowing what information to communicate and to whom.

Stress Tolerance. Ability to perform under pressure and during opposition; ability to think on one's feet.

Oral Communication. Ability to make a clear oral presentation of facts or ideas.

Written Communication. Ability to express ideas clearly in writing; to write appropriately for different audiences— students, teachers, parents, etc.

Range of Interest. Competence to discuss a variety of subjects— educational, political, current events, economic, etc.; desire to actively participate in events.

Personal Motivation. Need to achieve in all activities attempted; evidence that work is important in personal satisfaction; ability to be self-policing.

Educational Values. Possession of a well-reasoned educational philosophy; receptiveness to new ideas and change.

As in other assessment centers, these behavior dimensions form the core of the NASSP Assessment Center Project. Once particular behavior dimensions are identified as appropriate for a position, the next step is to design exercises to elicit behaviors.

Assessment Exercises

Just as there is no one set of managerial skill dimensions, there is no universal set of activities which all assessment centers use. There is, however, a common belief that samples of actual behavior are preferred over signs of behavior. A simulation exercise will extract a *sample* of a person's behavior while a general intelligence test will, more or less, provide a *sign* that a person will act intelligently. Both samples and signs offer specific advantages, and assessment centers benefit from both kinds of data-gathering. Exercises or activities which might be included in an assessment center are:

1. *In-baskets.* In an in-basket exercise, a participant is asked to respond to a number of written memoranda, letters, and notes within a specified time. The participant assumes a specific role and is given the opportunity to display skill in several behavior dimensions related to on-the-job performance.

2. *Leaderless group discussions.* Participants are given background information for study and are then asked to perform a specific task or reach consensus on a decision. Participants may be assigned a specific role in a competitive leaderless group exercise or may, instead, have no particular role to fill. These exercises are usually designed to measure leadership behaviors and other behavior dimensions.

3. *Interview simulation.* In this type of exercise, a participant may be asked to conduct a one-on-one interview with an irate customer or client, an insubordinate employee, a candidate for a job, an employee with a problem, or a similar interpersonal situation.

4. *Schedule making.* Because managers frequently schedule the work of others, this type of exercise provides participants with an opportunity to demonstrate this type of supervisory and managerial skill.

5. *Case studies.* The use of case studies permits participants to analyze data about a specific situation, prepare alternate strategies to resolve the issue presented in the case study, and select one of more rational solutions. There are several variations on how participants may be asked to present their findings, ranging from written reports to superordinates to giving an individual oral report to an assessor who interviews the participant about the report presented.

6. *Management games.* These games often use teams of participants in investing or managing a company's stock in trading or acquiring orders, other businesses, etc.

7. *Background interviews.* In an assessment center, a background interview serves as an information gathering technique. The assessor who conducts the interview may provide a written report which offers information about several dimensions of behavior. A structured interview format is usually used to establish consistency in the types of information gathered by assessors.

8. *Paper-and-pencil tests.* Tests and inventories on personality, intellectual ability, verbal and quantitative skills, aptitudes, and interests, as well as other aspects of personnel psychology may be used to provide information about participants.

9. *Fact-finding.* This type of exercise requires the participant, working alone, to read a brief description of a problem, seek additional information from an assessor who serves as a resource person, and then arrive at a decision and solution for the problem. A report must be prepared and given orally. The report is given to the assessor who served as the resource person, to a second assessor who serves as an observer, or to both. Usually the differing phases of a fact-finding exercise are timed, and the participant is expected to complete activities for each phase within an allotted time. Analysis and stress behaviors are two common dimensions assessed by a fact-finding exercise.

10. *Staff meetings.* In a staff meeting exercise, a participant assumes the role of a unit head and meets with several staff of the unit (with these roles being played by trained personnel) to obtain information prior to a meeting with the chief executive of the agency or firm.

11. *Negotiation.* This type of exercise generally requires a participant to bargain with another person (an assessor or person trained for the role) who portrays a superordinate, subordinate, peer, or someone external to the work unit of the participant.

Not all types of exercises are included in assessment centers; the important consideration is the appropriateness of the exercise for eliciting behaviors that can be observed. Multiple exercises are used and are coded to the skill dimensions being assessed. Each skill dimension is keyed to more than one exercise so that the principle of multiple observations is followed.

Assessors

Training of assessors is an integral part of an assessment center. Such training is needed to produce highly skilled assessors who can record observed behaviors and write objective reports. Training often will have the serendipitous effect of improving on-the-job skills of those trained (Kelley, 1982). Although assessors may benefit

professionally and personally from training, its purpose is to prepare individuals who can provide valid and reliable observations of participants' behaviors pertinent to the targeted dimensions. A training program should seek to develop:

1. An understanding of the meaning of each skill dimension and an understanding of the "look fors" in the exercises used in the assessment center.

2. Observational skills related both to the skill dimensions and to each activity or exercise included in the center.

3. Skill in classifying or categorizing behaviors observed.

4. Skill in rating behaviors, i.e., differentiating between varying levels of skill on the part of participants.

5. Skill in assuming roles necessary for the operation of the assessment center, e.g., as a resource person in a fact-finding exercise or as a subordinate in a "staff meeting" exercise.

6. Skill in writing reports which carefully record and document the behaviors demonstrated by participants.

7. Skill in evaluating and integrating data related to a skill dimension, when the data are from multiple activities or exercises and when overall ratings of skill levels must be made during the "jurying" of participant performance.

8. Skill in providing recommendations for inclusion in reports to participants, including recommendations about selection, promotion, or development.

The use of guidelines in training manuals, standardized report forms, and uniform observation processes helps to increase the reliability of observations and written reports. Systematic procedures for observing, recording observations, coding by dimension, and interpreting data should be provided in the training sessions and should then be used to monitor performance of assessors.

Assessors are frequently selected from within an organization, from both line and staff positions. If assessors are used from external sources, the skill of those assessors must be high for their judgments to be accepted by employees in the organization operating an assessment center. The use of outside consultants is a common practice; highly skilled assessors may add a quality of heightened objectivity to the operation of a center, provided the outsiders are perceived to be credible within the organization.

The exact number of private and public agencies using assessment centers for selection, placement, and development of personnel is unknown; a good estimate is that there are over 4,000 operating in the United States. Most of the large corporations in the U.S. and the world use assessment centers as part of their personnel programs. Projections for the future have suggested a continuing interest and increase in the use of assessment centers (Assessment Designs, Inc., 1979). Based on a half-century of use in business and industry, government agencies, and military forces, research studies have documented the validity and reliability of assessment center ratings as predictors of success. Assessment centers are used to select entry- and middle-level managers, identify candidates with promotion potential, and provide a basis for developmental programs.

❖ Chapter 3 ❖

THE FUTURE OF ASSESSMENT CENTER METHODS

The contributions of numerous individuals laid the groundwork for the application of assessment center methods to administrator preparation programs. Those who have developed theoretical material for educational administration and have conducted research in teaching methods such as simulation, have provided important sources of understanding of the foundation of assessment centers. In like manner, industrial psychologists have established an essential part of the data base for the application of assessment center methods to the field of education. Through the integration of theory, simulation, and use of assessment center methods by industrial psychologists, the development of the National Association of Secondary Schools Principals Assessment Center Project was possible.

Currently, sophistication of assessment method ranges from highly structured and validated processes to those which are assessment centers in name only. The most widely used assessment center in education is that developed by the National Association of Secondary School Principals (NASSP). The network of assessment centers established across the nation by NASSP is gathering data and accumulating an expanding experiential base of operations. Alternatives to assessment centers established by NASSP are of three general forms: (a) consultant services which provide a structured interview for screening candidates, (b) newly established and generally abbreviated approaches to assessment center applications, and (c) the continuation of traditional, established practice which does not include assessment

center methods.

The assessment center will change. Like any complex process, it will undergo modifications and adaptations as use dictates and the market place demands. If assessment centers are to become an established process within the educational enterprise, there will have to be clear evidence of value derived from the investment. Users of assessment center method will be called upon to demonstrate positive results. The adoption of assessment center methods will require the ability to maintain the discipline of the method and the ongoing collection and analysis of feedback information. If the discipline of the method is not maintained, it will join other innovations that have been discarded and later rediscovered or reinvented.

As the future of assessment center methods is viewed, there are questions and considerations that call for judgments and decisions. Continued development and evaluation will be required as greater sophistication and maturity in the selection process are achieved. Assessment center methods, properly used, will contribute to the quest for excellence in education. By contrast, if traditional practices prevail, rather than data- based decisions, in the selection of administrative personnel, or if undisciplined and unvalidated changes contaminate the method, potential benefits will be lost.

The life of a complex innovation can be traced along a path of discovery, development, testing or piloting, adopting and utilization, and, finally, a stage of improvement or decline, pointing to continuation or termination. Assessment center methods can be expected to follow a similar cycle. Of course, some intervention, such as legislation that mandates the use of assessment centers for certification, could alter the cycle. Ultimately, assessment center methods will have to demonstrate positive results and, at the same time, prove practical.

In all likelihood, assessment centers will be subjected to modifications. The attention the method has attracted will motivate thoughtful experts to search for ways to improve the method. Like any complex process, some users and experts will be challenged to find ways of providing legitimate shortcuts that will yield equivalent results. As research in related fields sheds new light on the method, variations will likely be introduced. Long-range use of the method will ultimately depend upon the quality of modifications.

Changes in the method will also be suggested by pragmatists who will call for maintaining high quality results but at reduced costs. Accessibility and adaptability will also motivate some to suggest that current approaches be used for assessing individuals for whom the method was not intended. Such demands raise the issue of adhering to ethical standards and maintaining quality controls. The present state-of-the-art suggests that, if standards of quality are not respected, the method will confront a serious threat to its credibility. Once quality control is lost, the value to be derived from assessment centers cannot be demonstrated.

There may be still another cluster of proposed modifications to the method. Those who lack a thorough understanding of assessment centers may attempt to introduce forgeries. Consequently, *caveat emptor*. Unfortunately, the profession can suffer from the intrusion of forgeries that fail to generate appropriate results and cast a negative pall upon the method itself. Assessment centers possess great potential for improving the way administrative applicants are screened, and there may be those who would want to capitalize on that potential by marketing substitutes and shortcuts that lack validation.

In the future, assessment center methodology will change. Those who know the method can change it for the better to meet the demands of the educational system. Unfortunately, while improvements that are congruent with quality standards are expected, there may be those that can ultimately prove to be expensive to the profession. Educators who work in assessment centers and those who would be consumers of the product will be called upon to maintain a vigilant watch as they stand against the pressures that would threaten quality.

Applications. Several different applications or uses of assessment centers have been suggested. The original purpose of educational assessment centers was to assist in the screening process of prospective building principals. The NASSP Assessment Center Project was designed and validated for this purpose. Quite appropriately, providing assistance in the process of screening candidates has been the primary task to which assessment centers have been devoted.

The assessment method has also been used for diagnostic purposes. School principals have been assessed with the intent of determining areas which could be strengthened. If participants were found to be weak in a dimension, some form of developmental recommendation could then be suggested. While this use of the method has been employed, there is not yet sufficient experience or data collected to determine the degree of effectiveness of assessment center methods as diagnostic tools. While the logic seems sound, the results have not yet been validated in educational administration.

Relating assessment center methods to instruction is a third form of application. The question of whether or not prospective administrators can be taught to become more proficient in dimensions which are assessed in a center is an intriguing one. While instruction and testing related to some dimensions can be provided, there are other dimensions, such as judgment, that do not yield to a simple test for mastery. There have been attempts to relate instructional content to selected dimensions of the NASSP Assessment Center, however, there is not yet evidence that such efforts will enhance the ability of participants to do better when being assessed nor is there evidence that such instruction will improve performance on the job.

A review of preparation programs for educational administrators suggests that there is an overriding sameness about them (Cunningham, 1982) and that they are

overwhelmingly content centered. There is a mirror effect found in credentialling. Up to the present, there has been little interest on the part of those responsible for preparing building administrators to place much emphasis on assessment center dimensions. This lack of emphasis is paralleled by the management-centered concept of most preparation programs, in contrast to an emphasis on insights for understanding oneself and significant others. Many administrators who lose their jobs do so, not through a failure to demonstrate knowledge of content, but through their inability to get along with others or to adjust to the settings in which they work. Instructional methods, as related to assessment centers, have not been defined in such a way that would suggest any one approach or any combination of approaches. While there is some preliminary evidence to suggest that simulation, particularly the in-basket technique, is as satisfactory for teaching content as traditional approaches, and that it is better with respect to the affective domain (Sybouts, 1968), there is no specific evidence that simulation is better or worse for teaching prospective administrators to be more proficient in areas assessed in an assessment center. Although modified approaches for instructing prospective administrators date back to the work of Wynn (1972) and Bruno and Fox (1973), not all professors have an interest in such methods or feel comfortable, confident, or competent in the use of simulations, in-baskets, case studies, or various group techniques. In short, there is no proof that any one form of instruction is better than another.

The logic that using simulations, in-baskets, and small leaderless group activities to instruct prospective principals to become better candidates and more competent administrators is appealing. If there is any justification for administrator training programs, and if there is any value in providing in- service training for practicing administrators, then logic suggests that it is possible to enhance those competencies an individual possesses and ultimately contribute to the quality of performance on the job. Testing the results of this seductive hypothesis remains elusive.

Some of the most definitive research that has been done regarding efforts to teach assessment center dimensions has come from industrial settings. Byham (1982) reported on how assessment centers were used to evaluate the effectiveness of training programs in several firms. The volume of training is much greater than the documentation of the worth of that training. Some businesses, however, have evaluated training results. The New York Metropolitan Transit Authority matched 24 supervisors on age, length of service, supervisory experience, education, and performance ratings and assessed them on 12 performance aspects. Twelve participated in a supervisory training program while the other 12, as a control group, did not. All the supervisors completed pre-and post-test assessment center exercises. The improvement in performance in the scores for the experimental group was statistically significant.

Another study was conducted by AT&T, the first organization to evaluate the effectiveness of behavior modeling training. From a large group, representative of first-line supervisors, two smaller groups were randomly selected and matched on

age, sex, department, length of service, and span of control. The members of one of the smaller groups received behavior modeling training while those of the control group were not trained. Several weeks after the training, members of the experimental and control groups participated in a special evaluation assessment center. According to the independent ratings of the evaluators, the overall performance of those who received the behavior modeling training was dramatically superior to those untrained.

A slightly different approach was used by Central Telephone & Utilities Corporation (CT&U) to evaluate its behavior modeling program. Individuals completed five exercises in an assessment center; all exercises were videotaped. Afterward, the individuals completed training and were reassessed; performance in the assessment center was again videotaped. Assessors in another part of the country observed the videotapes and evaluated the individuals on 12 performance dimensions. The assessors did not know which tapes were "before" or "after." The results of the program were as follows (Byham, 1982, p. 35):

Overall Ratings of CT&U Supervisors' Effectiveness

	Percentage Distribution	
Overall Potential	Before Training	After Training
Excellent	0	17
Above average	22	25
Average	39	58
Below Average	17	0
Poor	22	0

The percentage of those rated Above Average or Excellent doubled after training; of the 39 percent who were rated Below Average or Poor, none received such a low rating after training in CT&U's program.

In yet another measure of training effectiveness, the Management Institute of the University of Alabama evaluated its management training program. Ten persons (experimental group) were randomly selected from 50 who had completed four weeks of training at the Institute. They were matched on the variables of level within employing organization, educational background, and experience with eleven persons (control group) who had not completed the Institute's training. The twenty-one persons completed assessment center exercises, and those in the trained, experimental group performed significantly higher than those in the untrained, control group. The assessors rated performance as satisfactory or above on eight dimensions. The ratings were as follows (Byham, 1982, p. 35):

Performance of Experimental and Control Groups at Alabama's Management Institute

Dimensions	Percentage with Satisfactory Ratings or above	
	Experimental	Control
Oral Communication	100	63.7
Sensitivity	100	63.7
Leadership	100	72.8
Delegation	80	63.7
Planning & Organizing	90	72.8
Problem Analysis	80	45.0
Judgment	90	45.0
Decisiveness	90	81.9
Total	93.3	63.6

Even though research has been based on small samples, the use of assessment centers as indicators of the effectiveness of training methods could be promising. The random assignment of individuals into experimental and control groups, the use of pre- and post-tests with training, the videotaping of performance to allow assessors to work at their convenience, and other variations could be applied to administrator preparation programs.

Questions have been raised about using assessment center results for administrator certification. Among the concerns are issues that relate to the method itself and others that emerge from political considerations. The logistics of making an assessment center available for all candidates would have to be considered. Although assessment center results would be more valid and reliable than the paper-and-pencil tests advocated by some legislators, there are still too many unanswered issues to suggest that certification should be based upon the completion of an assessment center.

Questions for Further Exploration. While numerous threads have been spun from prior research in various disciplines, the fabric which comprises the assessment center method is far from complete. The method has not yet reached maturity or full utilization and there is much developmental work that remains.

Even before there has been full utilization of assessment centers for assisting in the selection of building administrators, there have been calls for expanding the process to include central office personnel. When considering the applicability of assessment center methods to the selection of school superintendents, the question of whether or not school boards would find such information appealing or useful should

be considered. The more politicized a selection process becomes, the less likely that assessment center data would be considered by those responsible for the selection decision.

If the assessment center method is to be widely adopted, how will the profession police the system to ensure quality? If quality and credibility are to be achieved and maintained, there may be a need for establishing criteria for accrediting assessment centers. This could, however, generate the possible threat of overzealous institutionalization of the entire process, such that it could become overly rigid or embedded in bureaucracy.

If the assessment center method is to become more widely used, there will be a growing problem of finding sufficient numbers of trained assessors. Accompanying this problem will be the issue of how to finance assessment centers. As Stout (1973) suggested, more resources will need to be invested in the selection process. If the profession is to accept the assessment center method, which is costly when viewed solely from the perspective of conducting a center, users within the profession, as well as taxpayers and elected officials, will have to view the investment as one from which appropriate returns are derived. Again, in both the staffing of centers and in financing them, there is the constant threat to quality.

Demographic factors will also have to be considered when planning assessment centers. Managing an assessment center in large population centers may be much easier than doing so in remote and sparsely populated areas. In an urban center, a reservoir of candidates can be formed following assessments. In rural areas, in which there may be only one secondary principal and one elementary principal in a given district, it would be unlikely that a community would have the human or financial resources to screen candidates with an assessment center internal to the district. Decision makers in urban and rural areas will have to accept different approaches for using assessment centers.

Conclusions

Recent research supports the notion that the building administrator is the primary factor in having an effective school. Therefore, a rationale that dictates the best possible assessment and selection processes for choosing building administrators can easily be built.

The development of the assessment center method by government and industry has been adapted for educational purposes and has moved researchers to conclude that the assessment center process is far superior to the historically accepted approach that reflected the feelings, opinions and judgments of a hiring official based on data that were largely subjective. The assessment center method remains complex, labor intensive, and demanding, especially when integrity is carefully maintained. As is true in the application of any complex process, assessment center methods are

vulnerable to misuses and abuses. Most assuredly, assessment center methods will be refined and evolve into a process that will reflect improvements in the method, its results, and its applications.

If the assessment center method becomes more widely used and acknowledged as an accepted approach to assisting in the selection of building administrators, its influence will possibly expand to other related areas in the total domain of school administration. Assessment center "content" will undoubtedly be incorporated into administrator preparation programs and instructional methodology will, at least in some instances, parallel and complement that which is reflected in assessment center approaches. Placement services and certification of administrators are other segments that may ultimately be influenced by assessment center methods.

The adaptation and expansion of this assessment process carry the potential of dilution of the method, distortion, and possible misuses. The integrity of the method and its ultimate contribution to education must be maintained through continued development and evaluation by knowledgeable leaders in the field who demonstrate impeccable ethical standards.

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